



Knolls Atomic Power Laboratory

“Proudly Supporting the World’s Best Navy”

Evolution and Lessons Learned for an Effective Employee Concerns Management Program

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Author Biography

- Kevin M. Boyle, CIH
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Knolls Atomic Power Laboratory (KAPL) Operated for
the DOE by Bechtel Marine Propulsion Corporation
- Mr. Boyle is a certified industrial hygienist with
25 years experience in the health and safety
profession. He served in the Air Force as a
Bioenvironmental Engineer, was a program manager
for a Health and Safety Consulting Group, and is
currently the principal industrial hygienist at
Knolls Atomic Power Laboratory.

Introduction and Overview

- KAPL's Mission
- Employee Concerns Management Program
 - Program Elements
 - Case Studies
 - Lessons Learned/Elements for Success
- Summary and Questions

KAPL's Mission

KAPL provides superior nuclear propulsion systems for U.S. Navy Ships by designing the world's most technologically advanced, safe, and reliable reactor plants and systems, supporting the fleet of nuclear ships and training the sailors who operate them.



VIRGINIA Class



OHIO Class

KAPL's Employee Concerns Management Program

- Goals of the program:
 - Eliminate Health and Safety deficiencies
 - Resolve concerns at the lowest level without the need of outside organizations
 - Establish a safety culture that is open, receptive, and cooperative
 - Document and track concerns

Program Elements

- Initial Response – within 24 hours
- Investigation
- Communication
- Documentation
- Follow Up and Resolution

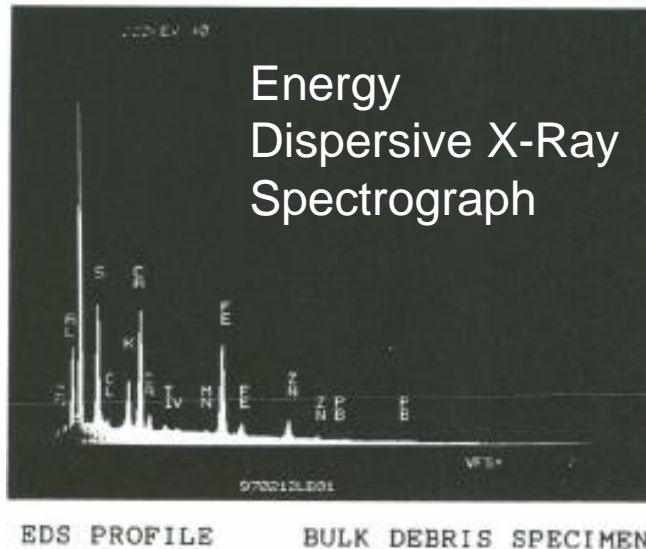
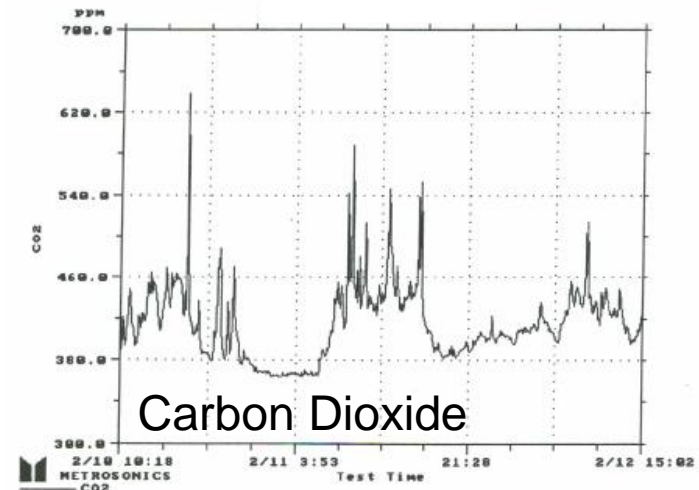
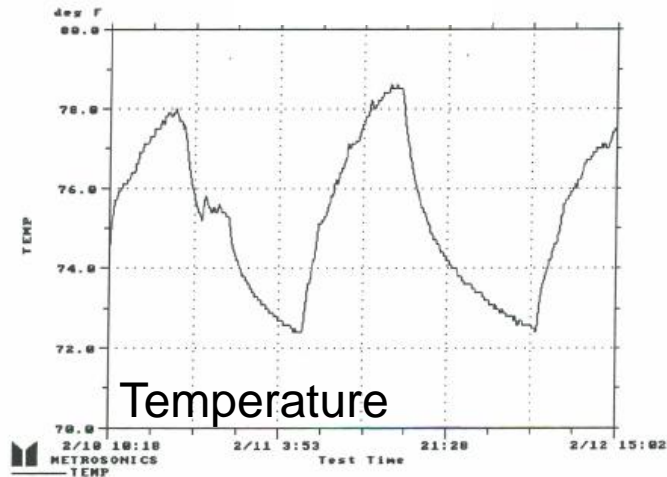
Case Study #1 - Background

- Multiple Facility Deficiencies
 - Legacy Conditions (PCBs, Lead, Asbestos)
 - Dirty Workplace (Mold, Dust, Debris)
 - Temperature
 - Delay's in Office Renovations
- Dissatisfaction of a Few Employees Spread to Many
- Comprehensive Health and Safety Intervention

Case Study #1 - Investigation

- Employee meeting; Concerns Identified
- Extensive sampling plan developed
 - Extensive air monitoring
 - Extensive bulk sampling
 - Assessment of air quality
- Communication during evaluation
 - Each day's sampling activities were explained
 - Status briefings were performed at least weekly

Case Study #1 - Investigation



Case Study #1 - Conclusion

- Slow response led to employee health concerns
- Employees lost confidence in management
- Comprehensive study required to ultimately satisfy employees
 - Forty (40) person-day effort
 - \$20,000 analytical laboratory costs
 - No health hazards found

Case Study #2 – Background

- Musty Odor, Seasonal/Cyclical
- Multiple Concerns
 - Employee reports seizure episodes
 - Employee reports “burning” eyes, scratchy throat, and runny nose
 - Employee reports “bad smell” and headache
 - Employee self limits time spent in area

Case Study #2 - Investigation

- Multidisciplinary Team Formed
 - Tenant/Area Management
 - Engineering and Maintenance
 - Medical
- Facility history (Foam and Stucco Siding, Supply Air Disconnects, Local Exhaust Hoods, Interconnected Facilities)
- Interviews – Best Source of Information

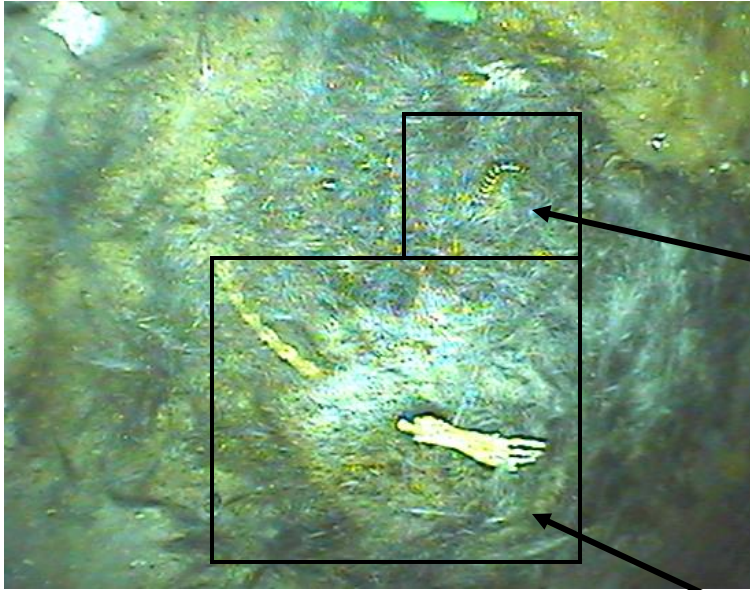
Case Study #2 - Investigation



Tenant identified most probable source of odor.

Rodent nest found under ramp leading to building addition.

Case Study #2 - Investigation



Wall cavity inspection
with fiber optic camera.
There were more issues
than we thought!

Case Study #2

- Conclusions
 - Complex Facility History, Many Stakeholders Involved
 - Employees provided important “clues”
 - Creative employment of resources
 - Daily interaction with managers and tenants
 - Problem found and resolved
 - Employees satisfied

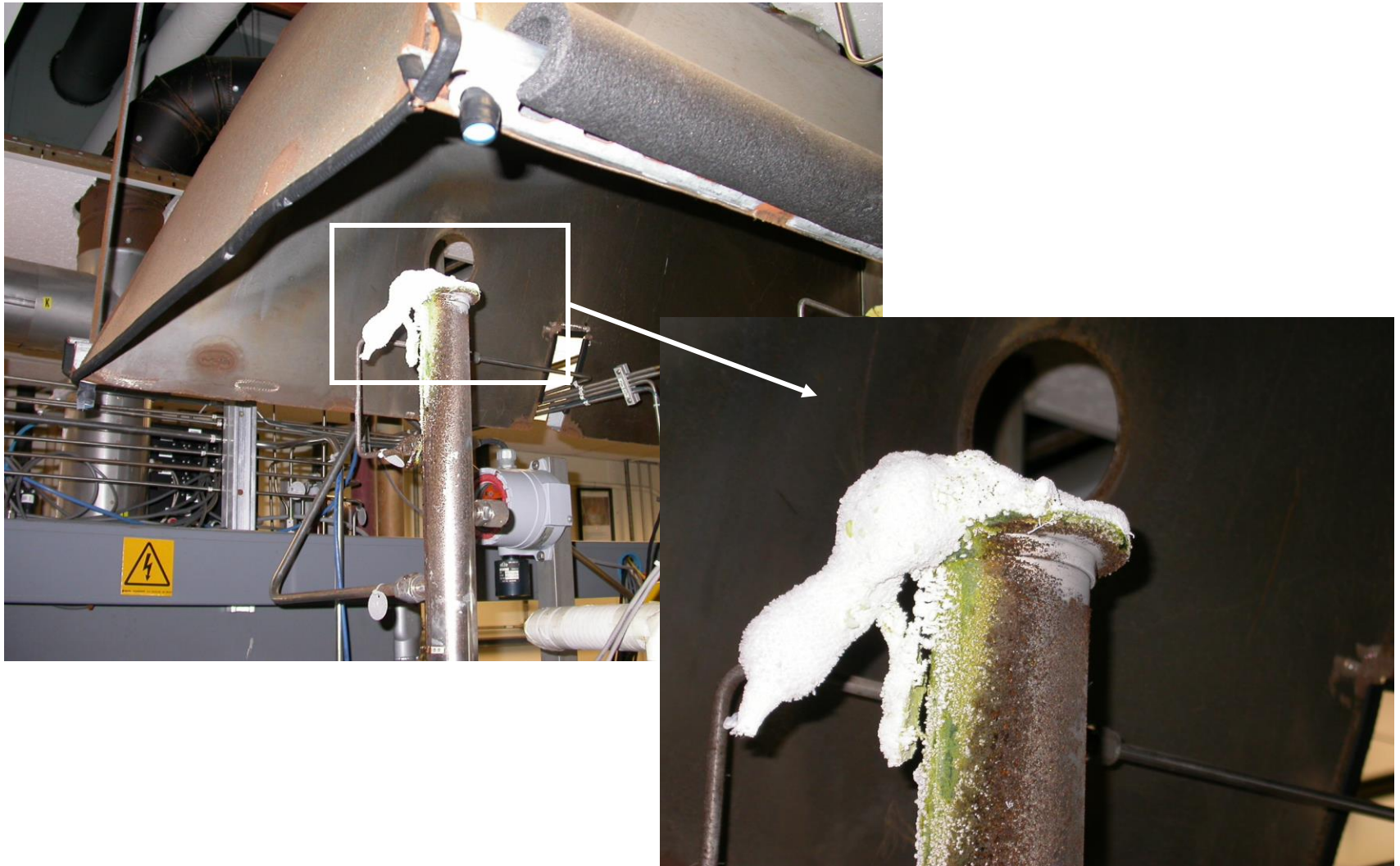
Case Study #3 - Background

- Facility shut down with plans to re-start
- Moisture reactive chemical left in supply container
- Relief-valve compromised, chemical gradually released to room air over several months
- Routine inspection found evidence of release
- Employee in adjacent space attributed recent health concerns to the chemical

Case Study #3 - Investigation

- History and timeline of events reviewed
- Material toxicology reviewed
- Industrial Hygiene and Medical consulted
- Communication established with tenants in adjacent facility
- Team formed to properly lay up facility

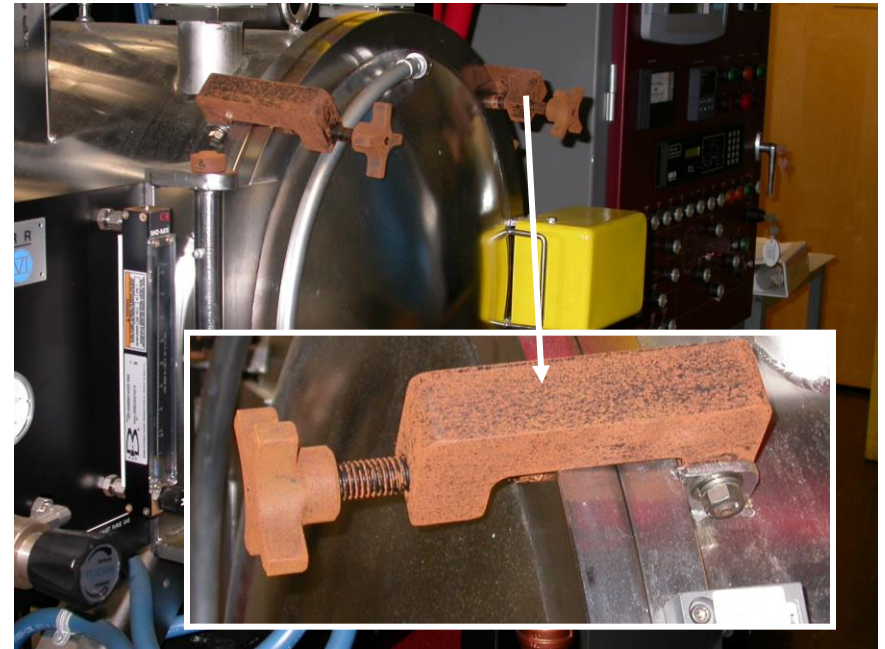
Case Study #3 - Investigation



Case Study #3 - Investigation



Chemical supply vessel
in ventilated cabinet.



Corrosion on carbon steel bolts

Case Study #3 - Conclusion

- Facility dismantled
 - Controlled access and ventilation
- Employee's concern addressed:
 - Toxicology review
 - Exposure timeline
 - Medical counseling
 - Process changes

Lessons Learned

- Employee communication is KEY
- Always believe the employee's concern is real
- Promptly involve the employee
- Keep the employee informed at all stages
- Involve employee's manager early
- Manager must take lead role, be objective, and be the employee's advocate
- Success or failure hinges upon the execution of the concerns resolution process

Elements for Success

- Contact the employee promptly (same day) to demonstrate responsiveness
- Solicit the employee's opinion and expectations in developing a course of action
- Identify all stakeholders
- Explain the course of action and keep to the agreed plan
- Review the conclusions and corrective actions with the employee
- Document the concern, the actions taken, and the final review with the employee

Questions